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(56) Documents Cited

GB 2162816 A GB 0987105 A US 5135784 A

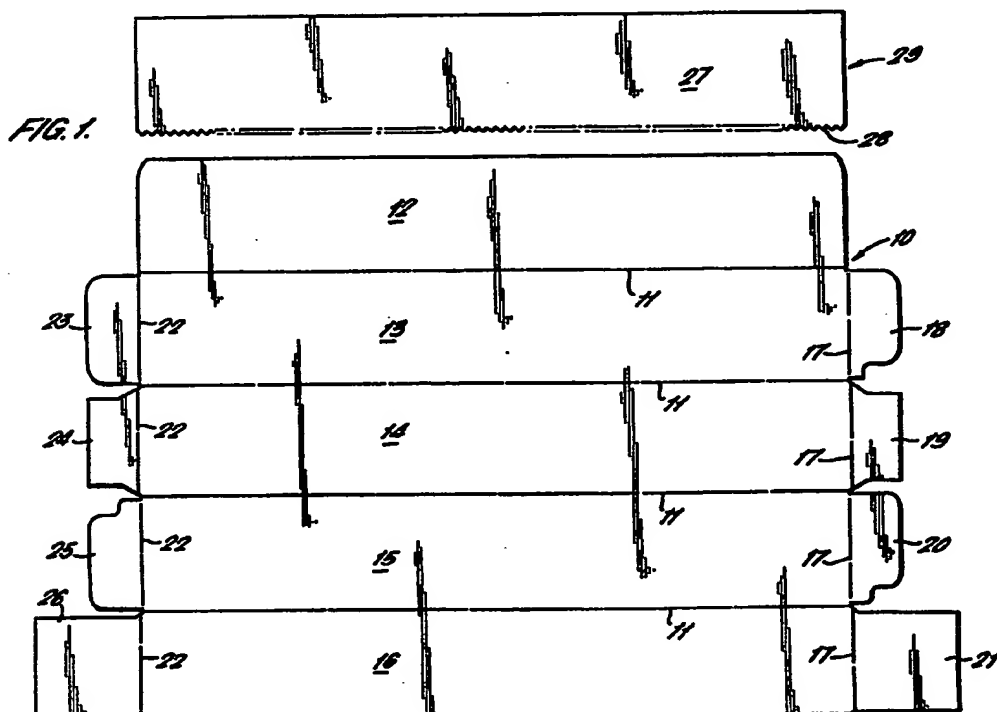
(58) Field of Search

UK CL (Edition L) B8M MB10

INT CL⁵ B65D, B65H

(54) Wrap-film dispenser:film cutter

(57) The dispenser comprises a container made completely from paper board material to aid disposal, for dispensing pieces of film from a roll, in particular pieces of polyvinylchloride (PVC) and non-PVC film products (cling film), microwave and food wraps. A paper board blank 10 has separate paper board member 29, with cutting edge 28, glued to side 15, and the blank 10 is then folded up and glued about a roll of film to be dispersed. Side 16 is pulled away from the container to expose edge 28. Member 29 may be of less width than side 15.



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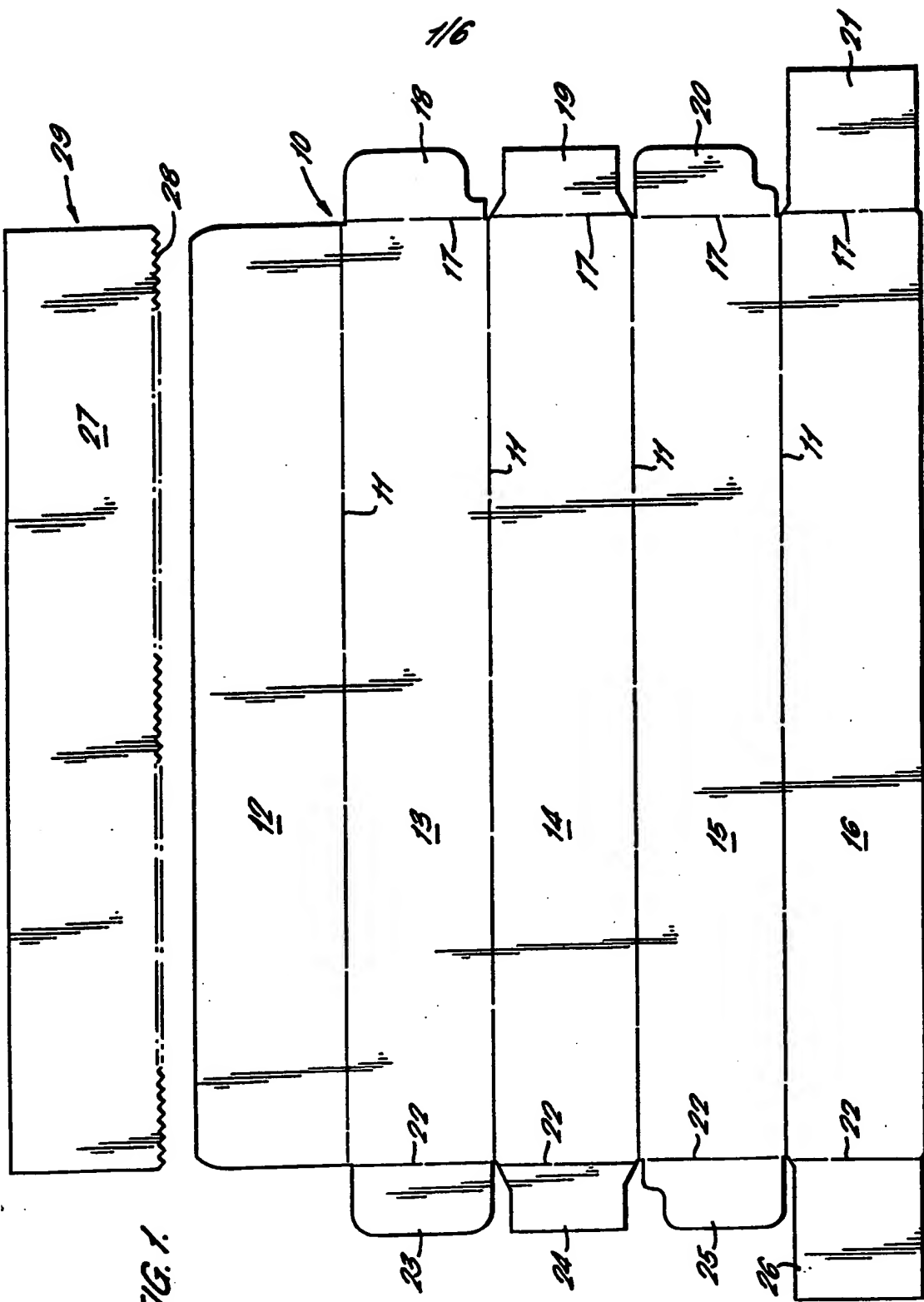
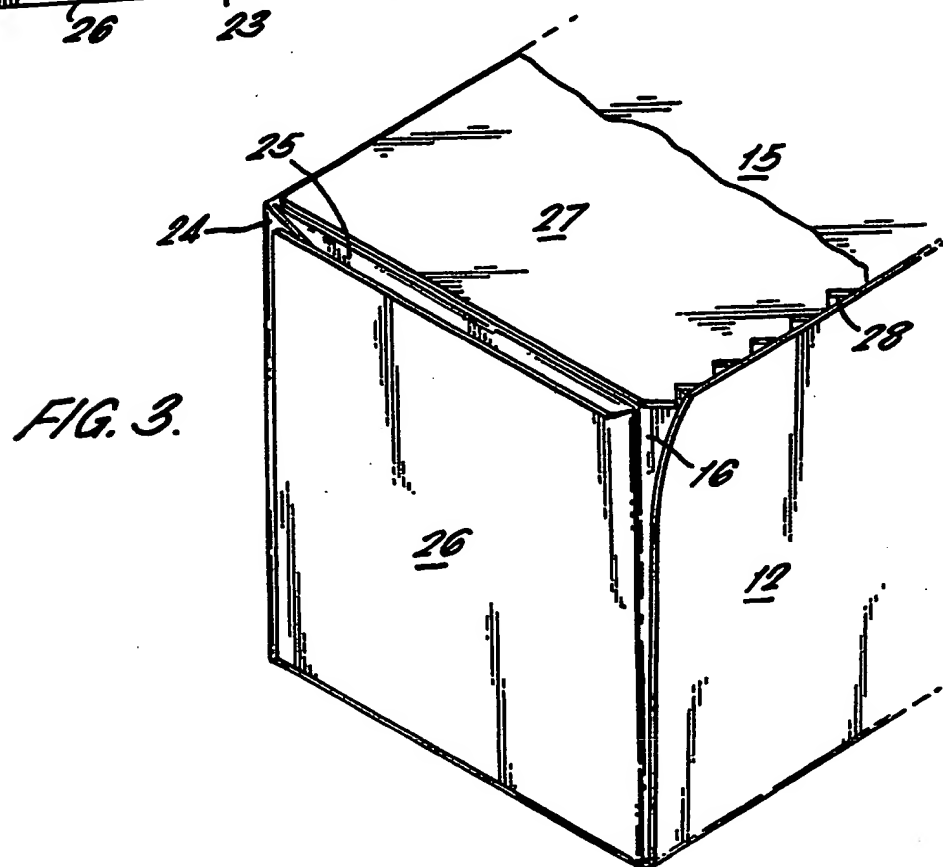
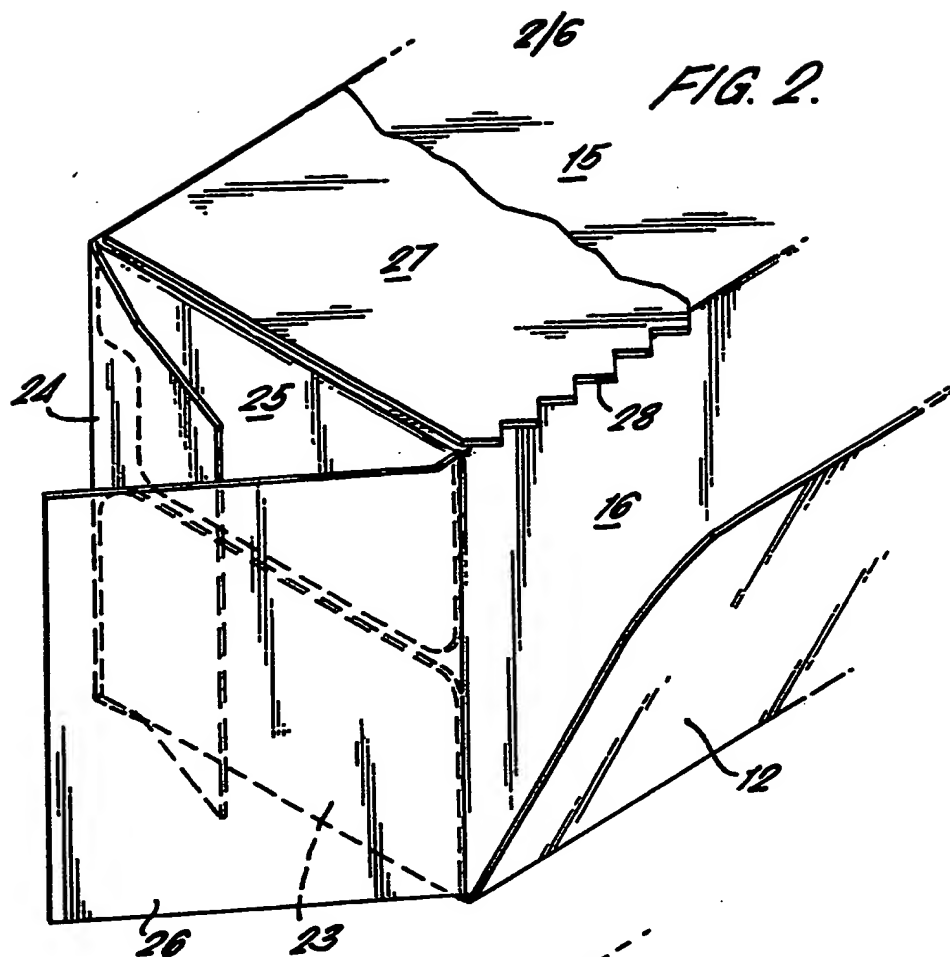


FIG. 1



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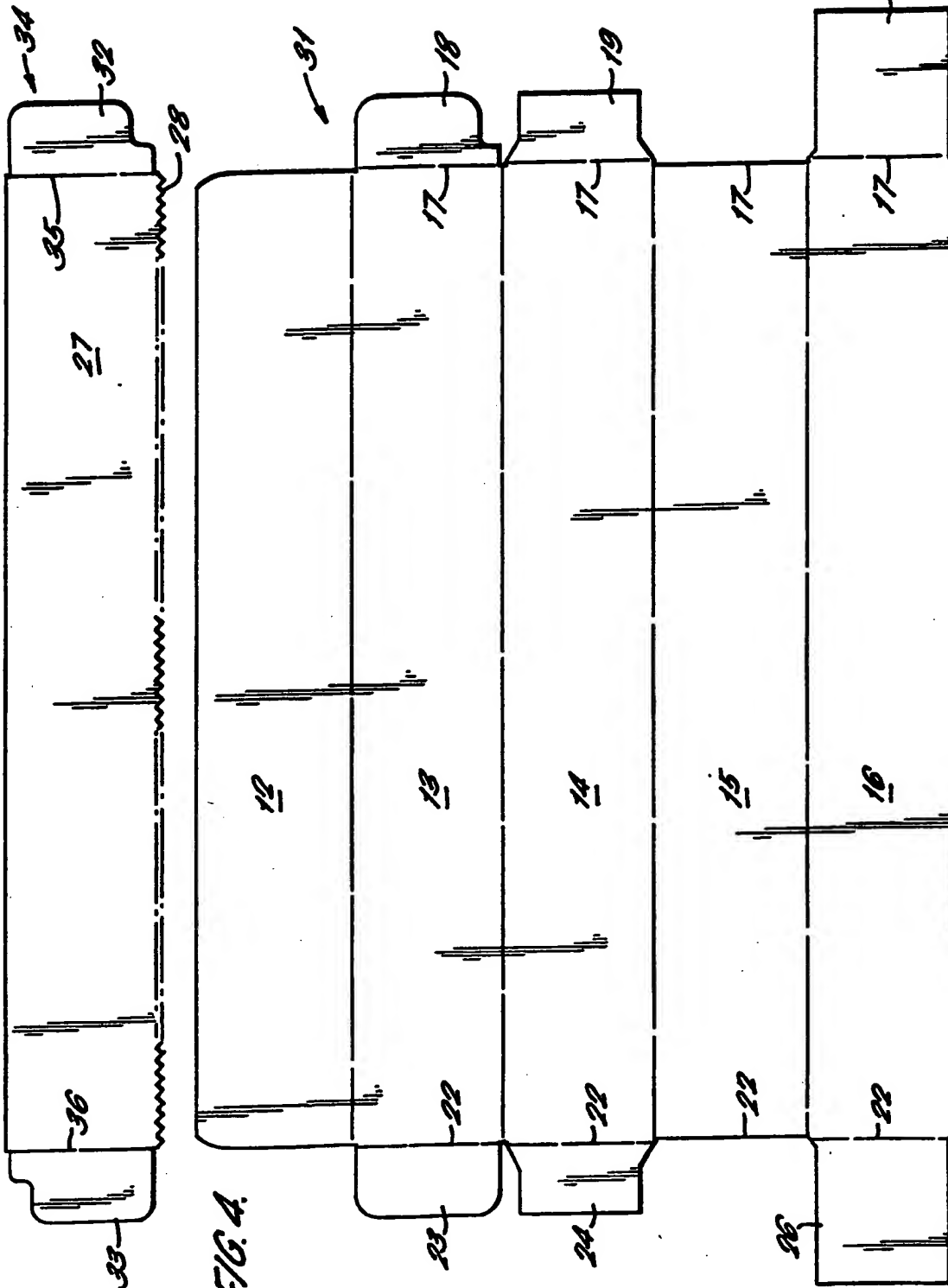
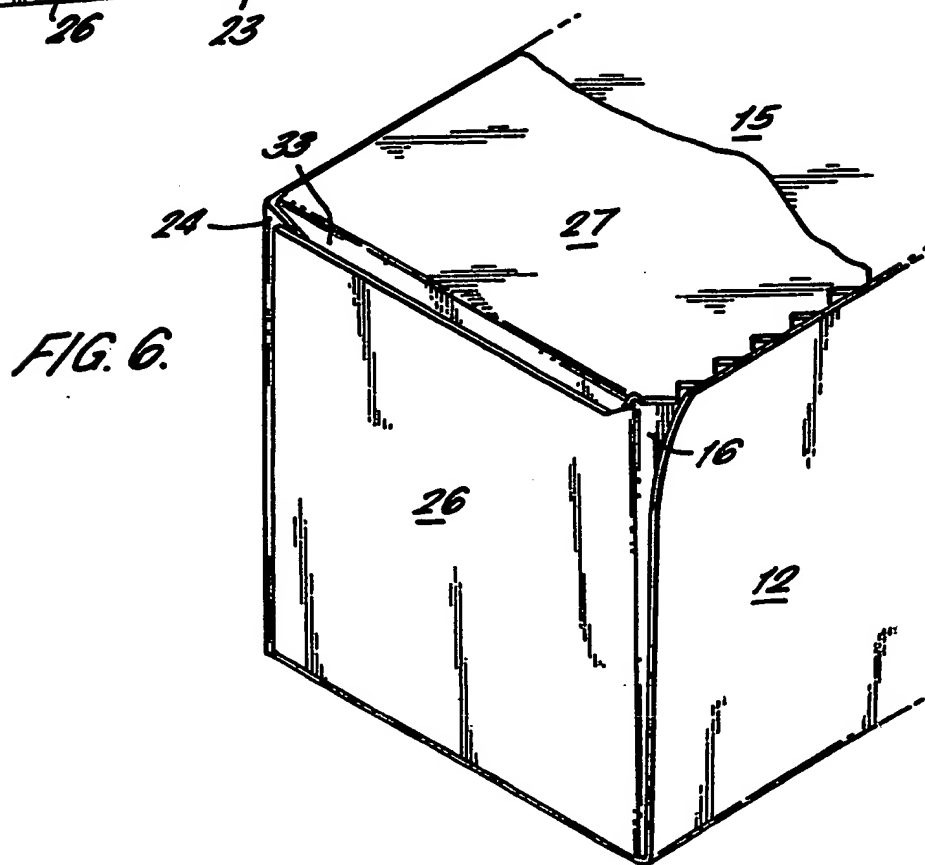
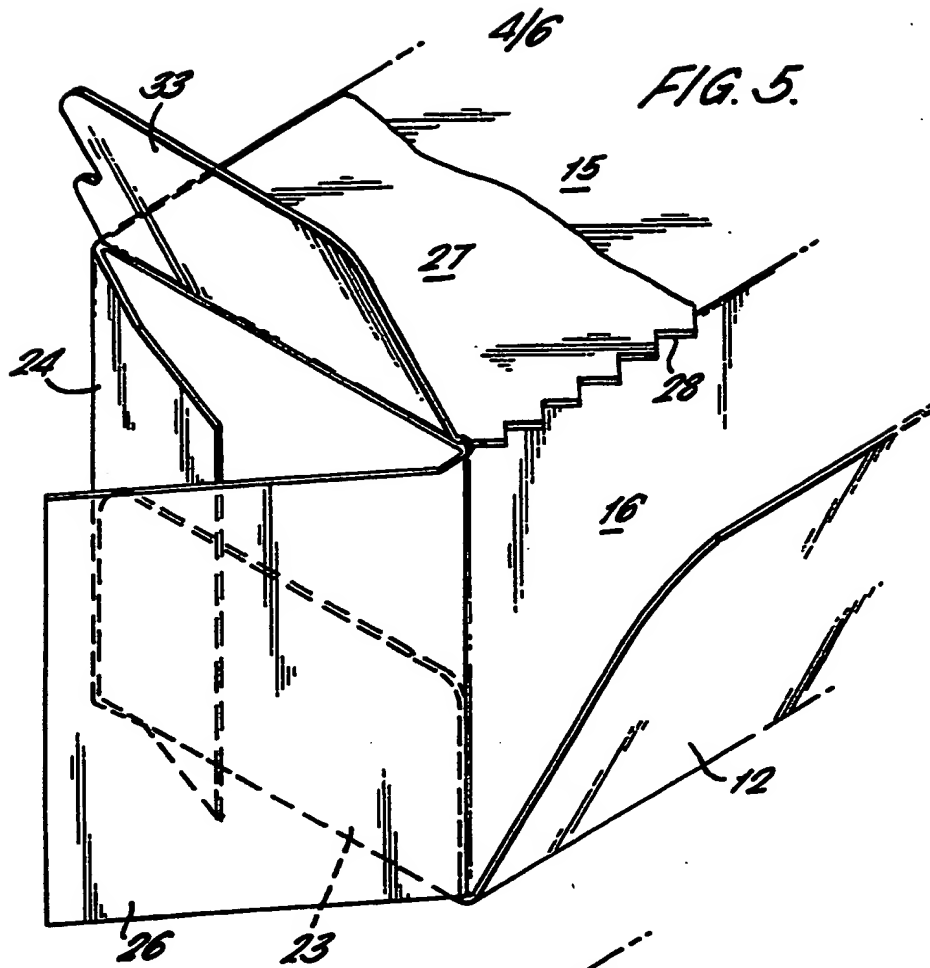
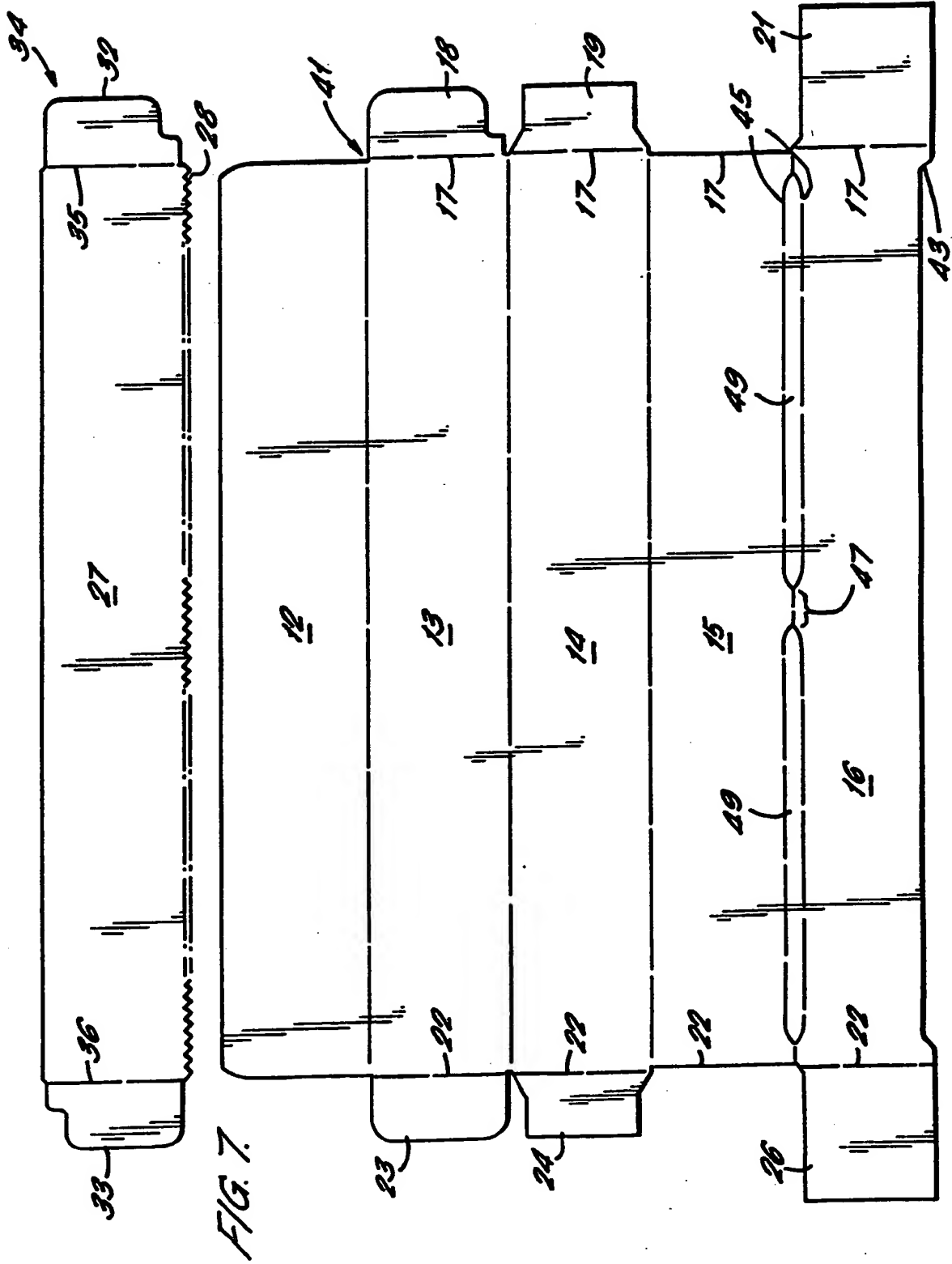
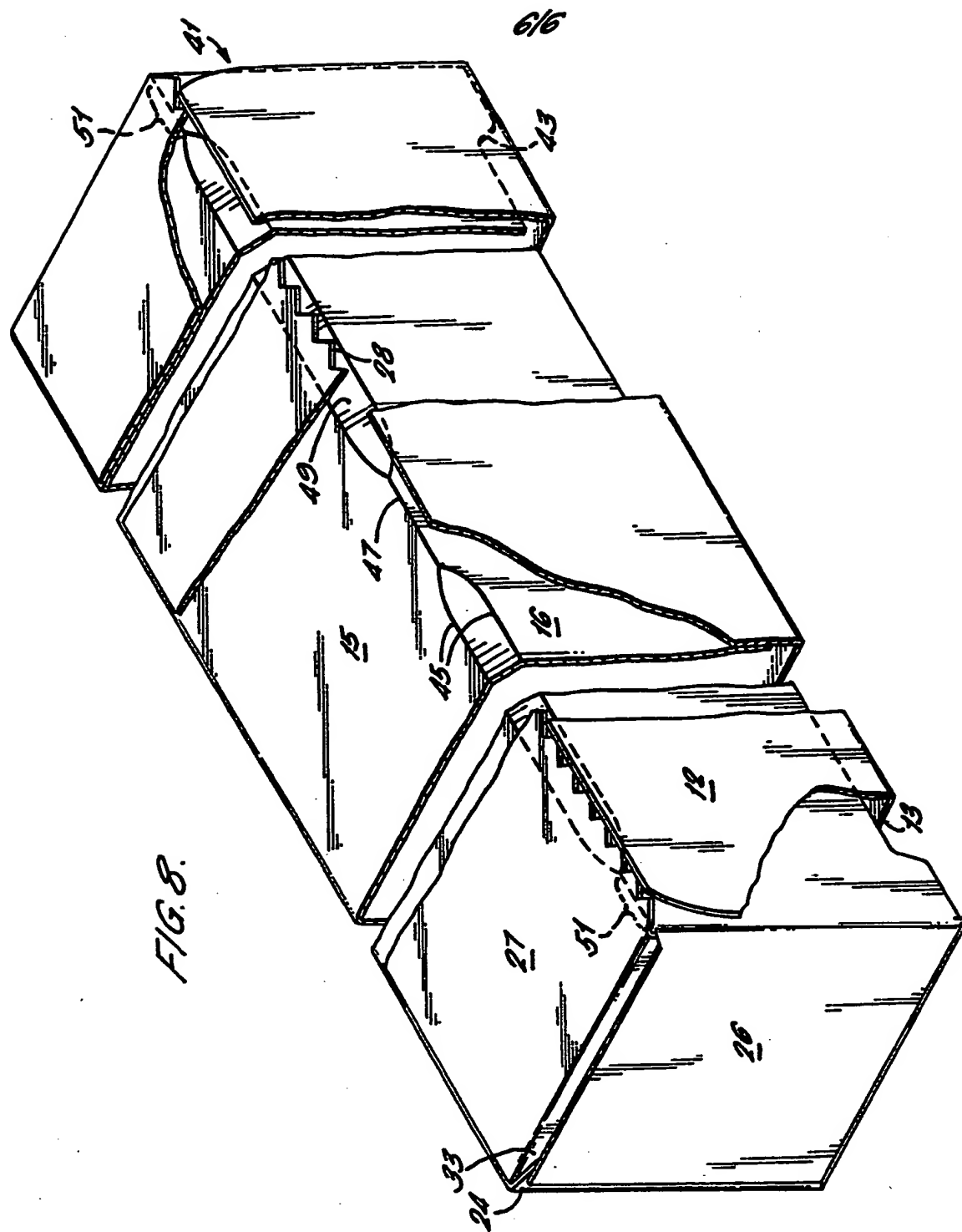


FIG. 4.







DISPENSING CONTAINER

The present invention relates to a container made completely from paper board material for
5 dispensing sections of material from a roll, in particular pieces of polyvinylchloride (PVC) and non-PVC film product (cling film), microwave and food wraps.

Containers for dispensing rolls of cling film
10 and aluminium foil are well known in the art. For example, paper board boxes may be provided with a strip of metal having a serrated edge for the easy tearing and dispensing of such materials. However, the following problems are associated with the
15 manufacture and use of paper board boxes having a metal edge; a process involving specialized machinery is required to affix the metal edge to the box; the process is noisy, inefficient, slow and expensive; the sharp unprotected metal edge is dangerous to the
20 consumer, and the product is environmentally unsound. In order for the product to be recycled the two different materials of the box, namely the metal strip and the paper board of the box must be separated. In some countries such packaging
25 comprising two different materials is banned due to difficulties in recycling. In addition, the metal used to form the serrated edge is not a renewable resource.

In an attempt to overcome many of the problems
30 associated with the metal edged dispensing box, the plastic edged box was developed. However, this product is also associated with the high costs and low speed of production and exactly the same environmental concerns as the metal edged box.
35 Market success associated with such plastic edged boxes is considered to be due to the aesthetic appeal

of the transparent plastic edge, although it is thought that this is a potentially more dangerous product because the plastic serrated edge "looks safe" but can be just as harmful as the metal edge.

5 Manufactures of such dispensing containers have, in the past, attempted to develop containers in a single recycleable material. However, dispensing containers made completely from paper board have not been successful. For example, such containers have
10 been manufactured which have a serrated edge on the top edge of the dispensing box. This results in an ineffective cutting edge, which is too weak to withstand the number of tearing operations required to dispense a roll of material. Attempts to harden
15 the cutting edge by use of lacquering have not resulted in a commercially successful box.

There has long been a desire to create an all-paper board dispensing container which provides an effective cutting edge which can withstand the
20 repeated tearing operation to dispense the roll of material within the box and which is compatible with manufacturers existing packaging machinery.

Accordingly, the present invention provides a container for dispensing material from a continuous
25 roll, having located on one side a cutting edge and a supporting member; the container, cutting edge and supporting member all being of paper board material.

The dispensing container is preferably a rectangular box. The supporting member is preferably
30 adhered to the side panel with the cutting edge by glue.

A preferred embodiment of the invention has the supporting member and the cutting edge provided by a single piece of paper board. The supporting member
35 is preferably substantially the same size as the side on which it is located.

The container is preferably provided with an additional wall which extends inwardly from the side with the cutting edge which serves to inhibit the accessible end of the material on the roll from
5 falling back on to the roll when a portion of the material is dispensed.

It is preferred that the supporting member be larger than the side on which it is located and any overlapping area used to form part of a different
10 side of the container. In particular it is preferred that the supporting member has substantially the same width but greater length than the side on which it is located and the overlapping length is used to form part of the end walls of the container.

15 The preferred size of container is one suitable to dispense a roll of cling film material 300 mm wide.

Preferred embodiments of the present invention will now be described with reference to the accompanying drawings in which;

20 Figure 1 shows a plan view of a blank of material for forming the main body of the container and a plan view of a separate piece of material forming both the supporting member and serrated edge for the container according to an embodiment of the
25 present invention.

Figure 2 shows a partial view of a container during construction from the units in figure 1.

Figure 3 shows a partial view of a closed container according to the invention constructed from
30 the units in Figure 1.

Figure 4 shows a plan view of units for forming another embodiment of the present invention.

Figure 5 shows a partial view of a container during construction from the units in Figure 4.

35 Figure 6 shows a partial view of the closed container constructed from the units in Figure 4.

Figure 7 shows a plan view of units for forming a preferred embodiment of the present invention.

Figure 8 shows a perspective view of a closed container constructed from the units in Figure 7 which is broken away in places to show parts more clearly.

Referring to the drawings, the blank for forming the main body of the container in Figure 1 consists of a shape 10 cut out of paper board material. The shape 10 is scored along horizontal lines 11 to delineate side panels 12, 13, 14, 15 and additional side panel 16. The horizontal lines 11 are to facilitate folding of the paper board material along these lines as appropriate. The shape 10 is also scored along vertical line 17 to delineate end panels 18, 19, 20 and 21 and along vertical line 22 to delineate end panels 23, 24, 25 and 26. The vertical lines 17 and 22 are also to facilitate folding of the paper board material along these lines as appropriate.

Additionally in Figure 1 is shown as a single member 29 a supporting member 27 provided with a serrated edge 28. The member 29 is also cut out of paper board material.

Prior to the shape 10 being formed into a container, the member 29 is glued to side panel 15. The face of the side panel 15 to which the member 29 is glued is the outer face when the container is made up.

The member 29 is positioned to substantially cover side panel 15, with the serrated edge 28 slightly overlapping but not being glued to additional side panel 16.

Conveniently, prior to forming the container a roll of cling film is placed along the inside face of side panel 14. The container is then formed around the roll of cling film as follows;

The blank, now with glued member 29 attached, is made up into a box by first folding along the horizontal lines 11 and releasably securing the inside face of side panel 12 to the outside face of side panel 16.

In this way a tube of rectangular cross-section is formed. Next, the end panels 18, 20, 23 and 25 are folded inwardly. A line of glue is provided to the outer face of end panels 19 and 24 which are folded inwardly and then the end panels 21 and 26 are folded inwardly on top of end panels 19 and 24 respectively and sealed to them by means of the glue.

A partial view of the container being formed is illustrated in Figure 2. This shows the formation of the end walls simultaneously with the sealing of side panels 12 and 16.

A partial view of the completed container is illustrated in Figure 3.

The container is supplied to the end user as a sealed box. As a sealed box, the side panel 12 covers the serrated edge 28 of member 29 as shown in Figure 3. In use the side panel 12 is detached from the side panel 16 to reveal a paperboard cutting edge. The available end of material from the roll within the box is located and peeled back to the required length. This length is dispensed by lying the material across the cutting edge and pulling securely downwards and across in a single motion.

Another embodiment of the present invention is illustrated in Figures 4, 5 and 6.

The main body of the container in Figure 4 consists of a shape 31. Shape 31 is the same as shape 10 in Figure 1 with the exception that end panels 20 and 25 are absent.

Additionally in Figure 4 is shown member 34 comprising a supporting member 27 provided with a

serrated edge 28. In addition, member 34 has panel extensions 32 and 33. Member 34 is scored along verticle lines 35 and 36 to delineate panel extensions 32 and 33.

5 The container illustrated in Figures 5 and 6 is formed in the same manner as previously described for the container in Figures 2 and 3. The only difference being that panel extensions 32 and 33 of member 34 replace end panels 20 and 25, respectively,
10 of side panel 15 to form the end walls of the container.

 The advantages of member 34 having additional extensions 32 and 33 as shown in Figures 4, 5 and 6 is to provide additional strength to side panel 15
15 and to form neat edges of the container.

 A more preferred embodiment of the present invention is illustrated in Figures 7 and 8.

 The main body of the container in Figure 4 consists of a shape 41. Shape 41 is the same shape
20 as 31 in Figure 4 with the exception of the cut away portion 43 of panel 16 and the scores 45 in the paperboard material in panels 15 and 16 which delineate area 49.

 Additionally in Figure 7 is shown member 34
25 which is the same as member 34 in Figure 4.

 The container illustrated in Figure 8 is formed in the same manner as previously described for the container in Figures 5 and 6. The advantages of the embodiment shown in Figure 8 are two-fold. Firstly
30 when the container is constructed (with member 34) and in use, the serrated edge 28 of member 34 is prevented from crushing and being blunted by the overlapping outer edge of panel 12. This is done by creating a small gap between the serrated edge 28 and
35 the outer edge of panel 12 due to the scores in panels 15 and 16 which when the container is

construted result in the angled edge 49. The angled edge 49 therefore creates a bevelled corner at which the serrated edge 28 and the outer edge of panel 12 extend over at substantially right angles to each other but do not touch. The strength of the serrated edge 28 is maintained, despite the scored lines 45, due to an unscored area 47 approximately mid-way along the line delineating panels 15 and 16 and unscored areas 51 at the outer extremes of the line delineating panels 15 and 16. The unscored area 47 supports the serrated edge at the approximate location where the thumb is positioned when the container is used to dispense material. The lines 45 need not necessarily be scored into the paperboard material but could instead be formed by creasing the paperboard material.

The other advantage of the embodiment shown in Figure 8 is the cut away portion 43 of panel 16. This cut away portion 43 prevents the material being dispensed from becoming trapped between the outer edge of panel 16 and the inside corner of the container between panels 12 and 13.

In the present invention the main body of the container may be formed from a single blank. This can be cut and creased to any size suitable for erecting and packaging on automatic and semi-automatic packaging machines known in the art.

The paper board container, the cutting edge and the support member may be formed from virgin or advantageously recycled or part recycled material and the whole container may therefore be recyclable and/or biodegradable.

The present invention can be formed from any type of paper board known in the art in the production of dispensing containers. The supporting member and serrated edge may be formed from the same

or different type of paper board as the remainder of the container and each other.

The containers of the present invention are considerably stronger than other all-paper board
5 containers because of the presence of the supporting member. This prevents the cutting panel collapsing or tearing in use. Although it is preferred that the supporting member is preferably substantially the same size as the side on which it is located it may
10 be considerably smaller, for example a narrow strip. When the supporting member is not substantially the same size as the side on which it is located it is preferred that it is adjacent to the cutting edge. The container is estimated to be effective for
15 approximately two hundred tears of a 60 m long, 300 mm wide, roll of standard cling film.

The strength of the side panel with the tearing edge is increased when the supporting member is very similar in length to the side panel on which it is
20 adhered. This increased strength means that the serrated edge can be extended to the same length as the side panel providing a more effective cutting edge.

In addition, the paper board cutting edge is
25 significantly less dangerous than the alternative metal or plastic cutting edge. The aesthetic appeal of the box may also be improved by decoration of the cutting edge in accordance with the remainder of the box.

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CLAIMS:

1.A container for dispensing material from a
5 continuous roll, having located on one side a cutting
edge and a supporting member; the container, cutting
edge and supporting member all being of paper board
material.

10 2.A container as claimed in claim 1 which is a
rectangular box.

3.A container as claimed in claim 1 or claim 2
wherein the supporting member is glued to the side of
15 the container with the cutting edge.

4.A container as claimed in any one of claims 1
to 3 wherein the cutting edge and the supporting
member are provided by a single piece of paper board.
20

5.A container as claimed in any one of claims
to 4 wherein the supporting member is substantially
the same size as the side on which it is located.

25 6.A container as claimed in any one of claims 1
to 5 which has an additional wall which extends
inwardly from the side with the cutting edge and
inhibits the accessible end of the material on the
roll from falling back onto the roll when a portion
30 of the material is dispensed.

7.A container as claimed in claim 6 wherein the
additional wall extends from the side with the
cutting edge at least initially at an acute angle to
35 the side with the cutting edge.

8.A container as claimed in claim 6 or claim 7 wherein at least a substantial portion of the inner edge of the additional wall does not contact any other part of the container.

5

9.A container as claimed in any one of claims 1 to 6 wherein the supporting member is larger than the side on which it is located and any overlapping area is used to form part of a different side of the container.

10

10.A container as claimed in claim 9 wherein the supporting member has substantially the same width but greater length than the side on which it is located and wherein the overlapping areas beyond each end are used to form part of the end wall of the container.

15

11.A container as claimed in claim any one of claims 1 to 10 which is used to dispense a roll of material 300 mm wide.

20

12.A container as claimed in claim 1 substantially as hereinbefore described with reference to and as illustrated in Figures 2 and 3 of the accompanying drawings.

25

13.A container as claimed in claim 1 substantially as hereinbefore described with reference to and as illustrated in Figures 5 and 6 of the accompanying drawings.

30

14.A container as claimed in claim 1 substantially as hereinbefore described with reference to and as illustrated in Figure 8 of the accompanying drawings.

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15.A container as claimed in anyone of claims 12 to 14 which is used to dispense rolls of cling film material.

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Relevant Technical Fields

(i) UK Cl (Ed.L) B8M: MB10

(ii) Int Cl (Ed.5) B65D B65H

Databases (see below)

(i) UK Patent Office collections of GB, EP, WO and US patent specifications.

(ii)

Search Examiner
 G WERRETT

Date of completion of Search
 14 DECEMBER 93

Documents considered relevant
 following a search in respect of
 Claims :-
 1 TO 15

Categories of documents

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| Y: Document indicating lack of inventive step if combined with one or more other documents of the same category. | E: Patent document published on or after, but with priority date earlier than, the filing date of the present application. |
| A: Document indicating technological background and/or state of the art. | &: Member of the same patent family; corresponding document. |

Category	Identity of document and relevant passages	Relevant to claim(s)
X	GB 2162816 A (SHOREWOOD) see support member 5, 6, 7, Figures 1 and 4	1 to 4
X	GB 967105 (PAZO) see support member 5, Figure 2	1 to 5
X	US 5135784' A (OKUMURA) see tool 100, Figures 2 to 4	1 to 5

Databases: The UK Patent Office database comprises classified collections of GB, EP, WO and US patent specifications as outlined periodically in the Official Journal (Patents). The on-line databases considered for search are also listed periodically in the Official Journal (Patents).